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Qualcomm Incorporated  
Patents Department  
5775 Morehouse Drive  
San Diego, CA 92121-1714

EXAMINER

PEREZ GUTIERREZ, RAFAEL

ART UNIT	PAPER NUMBER
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2683

24

DATE MAILED: 05/07/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

12/1

# Office Action Summary

Application No.

09/158,938

Applicant(s)

Karmi et al.

Examiner

Rafael Perez-Gutierrez

Art Unit

2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-124 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-124 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 2683

### DETAILED ACTION

1. This Action is in response to Applicant's amendment filed on February 23, 2002. **Claims 1-124** are now pending in the present application. **This action is made FINAL.**

#### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

**Claims 1-124** are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Consider **claims 1-124**, the concept of signature has not been clearly defined in the present application in such a way as to reasonably convey to one skilled in the relevant art how to make and use the present invention. Since the signature is supposed to be different than a sequence number, according to Applicant's arguments filed on November 29, 2001, the present application must clearly disclose what a signature is, and how such signature is different from a sequence number. Just because a sequence number is disclosed as been used in communication systems with centralized control and the signature is disclosed as been used in communication systems accessing decentralized network does not mean that 37 CFR 1.71 is met as Applicant

Art Unit: 2683

argues and that one skilled in the relevant art would understand what the signature is, per se. Because the disclosure of the present application lacks such definition and differentiation, the present application is left open to interpretation of the term signature to be equivalent to sequence number since the present application also lacks of a proper disclosure providing a **clear** differentiation between signature and sequence number.

If Applicant considers the signature and the use of the signature to be the novel invention in the present application in view of the prior art (e.g., the sequence number and the use of sequence numbers) then the concept of signature should have been clearly defined in the disclosure of the present application.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the Examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

Art Unit: 2683

invention was made in order for the Examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

*Note to Applicant: For purposes of applying prior art and in view of the above remarks in the 112 first paragraph rejection, the term signature has been examined understood as being equivalent to sequence number.*

4. **Claims 1-43, 48-58, 62, 63, 65-81, and 86-94** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tiedemann, Jr. et al. (U.S. Patent # 5,392,287)** in view of **Schwendeman (U.S. Patent # 5,396,537)**, as applied in the previous Office Action.

Consider **claims 1, 2, 14, 57, 63, and 65**, Tiedemann, Jr. et al. clearly disclose a method for reducing power consumption in a mobile communications receiver in which a receiver (mobile station) receives a sequence of messages, each respective message containing a respective sequence number (signature) generated by a transmitter 10 in a base station (figure 1), and wherein the receiver compares the respective sequence number (signature) of any message

Art Unit: 2683

with at least one sequence number (signature) (column 8 lines 54-64).

However, Tiedemann, Jr. et al. fail to disclose that the respective sequence number (signature) is separate from the respective message.

Schwendeman clearly discloses a reliable message delivery system utilizing a paging transmitter system in which a message 200, which includes a message capsule 204, that is transmitted to one or more remote units 130 (mobile stations) includes a respective sequence number 208 (signature) (i.e., signature capsule) that is not included in the message 200 (i.e., is separate from the respective message) for purposes of reducing transmission overhead in the paging communication channel 122 (figures 1 and 2 and column 16 lines 38-43).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to slightly modify the teachings of Tiedemann, Jr. et al. with the teachings of Schwendeman in order to provide an overhead messaging method and system in a wireless communication system in which considerable power can be saved at a mobile station when sequence numbers associated with respective overhead messages are provided separately, thereby allowing a receiving mobile station to be capable of determining if it is necessary to received the overhead message associated with a respective sequence number just by comparing the respective sequence number with a previously received sequence number without the need to go throughout the whole process of receiving the overhead message, consequently, conserving power.

Consider **claims 3, 4, 6, 66, and 67**, and **as applied to claims 1, 2, and 65 above**, Tiedemann, Jr. et al., as modified by Schwendeman, also disclose that the receiver enters an

Art Unit: 2683

inactive state (sleeps) if a respective sequence number (signature) received matches a corresponding sequence number (signature) from the at least one sequence number (signature) (column 1 line 63 - column 2 line 4 and column 9 lines 16-20).

Consider **claims 5 and 7**, and **as applied to claims 1-4 and 6 above**, Tiedemann, Jr. et al., as modified by Schwendeman, further disclose that the respective message is transmitted during each successive occurrence of the active state (during the inactive state (sleeping)) (column 1 lines 53-60).

Consider **claims 8, 9, 13, 15, 16, 62, 68, and 69**, and **as applied to claims 1, 2, and 65 above**, Tiedemann, Jr. et al., as modified by Schwendeman, also disclose that the receiver remains in the active state and wait (listen) for a respective message, until the respective message is received, if a respective sequence number (signature) received does not match a corresponding sequence number (signature) from the at least one sequence number (signature) (column 9 lines 10-16).

Consider **claims 10-12, 17-22, 28-30, 33-37, 70-72, and 77**, and **as applied to claims 8, 9, 13, 15, 16, 68 and 69 above**, although not specifically disclose by the combined teachings Tiedemann, Jr. et al. and Schwendeman, it is inherently taught that the receiver enters the inactive state (sleeps) after the respective message is received (after listening stops, column 9 lines 16-20) and reenters the active state (wake up) after a predetermined time (e.g., 5.2 seconds) since the time range of the slot cycles disclosed by Tiedemann, Jr. et al. is between 2 and 128 seconds (column 4 lines 4-7).

Consider **claims 23, 24, 31, 32, and 39-42**, and **as applied to claims 10-12, 17-22, and**

Art Unit: 2683

**28-30 above**, Tiedemann, Jr. et al., as modified by Schwendeman, further disclose that the receiver (mobile station) receives a sequence of messages, each respective message containing a respective sequence number (signature), from a cellular telephone system (wireless communication system) (abstract and column 1 line 53 - column 2 line 5).

Consider **claims 25-27 and 73-76**, and as **applied to claims 10-12, 17-22, 28-30, and 68 above**, Tiedemann, Jr. et al., as modified by Schwendeman, does not specifically disclose listening for a first, second, and third respective message, wherein listening for the third respective message is done after listening for the second respective message, wherein said listening for the second respective message is done after listening for the first respective message.

However, Tiedemann, Jr. et al. does provide a clear teaching that would suggest to a person of ordinary skill in the art that the listening steps of a first, second, and third respective message, as claimed by the Applicant, can be done since Tiedemann, Jr et al. clearly disclose that the respective sequence numbers (signature) of respective messages received at the mobile station are compared with corresponding sequences numbers (signatures) previously stored and if the respective sequence number (signature) of a respective message has changed, the mobile station listens to said respective message (column 8 line 54 - column 9 line 20).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to further modify the combined teachings of Tiedemann, Jr. et al. and Schwendeman in order to listen to a respective message having a respective sequence number (signature) that does not match a corresponding sequence number (signature) previously stored



Art Unit: 2683

and, therefore, saving battery power since only a different message not previously received would be decoded.

Consider **claims 38, 53-56, 78, and 91-94**, and **as applied to claims 1, 42, and 65 above**, Tiedemann, Jr. et al., as modified by Schwendeman, further disclose that the sequence of messages are overhead information (i.e., overhead messages, e.g. base station parameters, channel list, access parameters) (column 9 lines 14-16).

Consider **claims 43, 48, 49, 58, 81, 86, and 87**, and **as applied to claims 1 and 65 above**, Tiedemann, Jr. et al., as modified by Schwendeman, further disclose the use of a hash function when assigning slot numbers (column 2 lines 48-52), therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to further modify the combined teachings of Tiedemann, Jr. et al. and Schwendeman in order to use a hashing function when providing sequence numbers (signatures) of sixteen or thirty-two bit value to messages.

Consider **claims 50-52, 88-90, and 118-120**, and **as applied to claims 1 and 65 above**, although Tiedemann, Jr. et al., as modified by Schwendeman, does not disclose the use of counter when giving a sequence number (signature) to a message, the Examiner takes Official Notice that is notoriously well known in the art to use counters when assigning sequence numbers (signatures) to particular sequences of messages.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to further modify the combined teachings of Tiedemann, Jr. et al. and Schwendeman with well known teachings in the art in order to provide sequence numbers

Art Unit: 2683

(signatures) to messages using values that are taken from a counter.

**Claims 79 and 80** are similarly rejected for the same reasons explained in detail above for **claims 1, 39, 40, and 78**.

### *Response to Arguments*

5. Applicant's arguments filed November 29, 2001 have been fully considered but they are not persuasive.

In the present application, Applicant argues, on page 11 last paragraph - page 12 second paragraph of the remarks, that the Examiner has failed to establish a prima facie case of obviousness because Schwendeman recites, in column 6 lines 48-50 and column 7 lines 17-63, that the transmitted message 200 typically includes identification and control information 202, which in turn includes message sequence number 208, as well as message data information, and therefore, Schwendeman fails to disclose the respective signature being separated from the respective message.

The Examiner respectfully disagrees with Applicant's argument because is focusing on an embodiment of Schwendeman's invention that is not the one relied upon by the Examiner for the rejection.

Schwendeman clearly discloses, on column 16 lines 38-43, an embodiment in which a reliable message delivery system utilizes a paging transmitter system in which a message 200, which includes a message capsule 204, that is transmitted to one or more remote units 130

Art Unit: 2683

includes a respective sequence number 208 (signature) (i.e., signature capsule) that is not included in the message 200 (i.e., is separate from the respective message) for purposes of reducing transmission overhead in the paging communication channel 122.

It is clear from the above embodiment in Schwendeman's invention that the sequence number is separated from the message, consequently, it is considered that the Examiner has established a clear prima facie case of obviousness.

***Allowable Subject Matter***

6. **Claims 64 and 95-124** would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, <sup>first</sup>~~second~~ paragraph, set forth in this Office Action.

7. **Claims 44-47, 59-61, and 82-85** would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, <sup>first</sup>~~second~~ paragraph, set forth in this Office Action and to include all of the limitations of the base claim and any intervening claims.

8. Since allowable subject matter has been indicated, applicant is encouraged to submit formal drawings in response to this Office Action. The early submission of formal drawings will permit the Office to review the drawings for acceptability and to resolve any informalities remaining therein before the application is passed to issue. This will avoid possible delays in the issue process.

Art Unit: 2683

*Conclusion*

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any response to this Office Action should be **faxed to (703) 872-9314 or mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**Hand-delivered responses** should be brought to

Crystal Park II  
2021 Crystal Drive  
Arlington, VA 22202  
Sixth Floor (Receptionist)

11. Any inquiry concerning this communication or earlier communications from the

Art Unit: 2683

Examiner should be directed to Rafael Perez-Gutierrez whose telephone number is (703) 308-8996. The Examiner can normally be reached on Monday-Thursday from 6:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, William G. Trost IV can be reached on (703) 308-5318. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

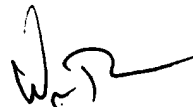
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700 or call customer service at (703) 306-0377.



Rafael Perez-Gutierrez

R.P.G./rpg **RAFAEL PEREZ-GUTIERREZ**  
**PATENT EXAMINER**

April 30, 2002



**WILLIAM TROST**  
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